

RESHAPING (ALL KINDS OF) BORDERS. THE SITE OF PENEDO GORDO IN THE CONTEXT OF NORTHWESTERN IBERIA SCHEMATIC ART*

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Abstract: *From the mid-1990s we have seen substantial changes in the way knowledge is produced in rock art research. Yet, their impact has been unequal across Europe, in line with the different epistemological traditions. One of the proposals involved the application of concepts from Biogeography to the joint investigation of Atlantic, Schematic and Megalithic Art. This approach was intended to ultimately contribute to a reassessment of the socio-cultural dynamics in Late Prehistory in Northwest Iberia. From a view of ensemble of rock art across the study area, we shall look closely at Penedo Gordo, a site with Schematic Art paintings in the Upper Tâmega valley. This paper brings an overview of the interdisciplinary investigation carried out, combining excavation and rock art recording. Evidence of human activities on site involved the production of lithic industry and one of the excavated layers revealed remains of paint fallen right below a decorated surface.*

Keywords: *Late Prehistory; Northwest Iberia; Schematic Art paintings; Penedo Gordo; Site excavation.*

Resumo: *Desde meados da década de 1990 temos assistido a mudanças substanciais na produção de conhecimento em arte rupestre, porém, o seu impacto foi desigual em meios académicos com tradições epistemológicas distintas. Uma das propostas prende-se com a aplicação de conceitos que emanam da biogeografia ao estudo relacional entre arte atlântica, arte esquemática pintada e arte megalítica. Pretendeu-se que esta abordagem, pudesse ser aplicada na investigação de realidades coevas e contribuir para repensar as dinâmicas socioculturais da Pré-história recente no noroeste peninsular. Partindo de uma visão de conjunto da área de estudo, contextualiza-se a descoberta do Penedo Gordo, um sítio com arte esquemática pintada no alto vale do Tâmega, apresentando-se os resultados do seu estudo interdisciplinar que articulou o registo da arte rupestre com escavação arqueológica. Esta revelou atividades relacionadas com a produção de indústria lítica e, numa das sondagens escavadas sob um dos painéis decorados, surgiram vestígios de matéria colorante.*

Palavras-chave: *Pré-história Recente; Noroeste peninsular; Arte esquemática pintada; Penedo Gordo; Escavação arqueológica.*

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1. INTRODUCTION

Common sense tells us that the simplest inquiry carries the ability to lead us to pioneering accounts on a given subject. The genesis of the research described in this paper was a simple and unprecedented question posed by one of us (BCR):

Why is there an absence of Schematic Art paintings in Eastern Galicia?

This triggered a journey, over a decade ago, designed to find responses, opening a new line of research in Galician Archaeology. Finally, in 2017, two painted rock shelters were discovered: Cova dos Mouros (Baleira, Lugo)¹ and Penedo Gordo (Vilardevós, Ourense). In the following year, also in the region of Ourense, were added to the list Pala de Cabras (Casaio, Carballeda de Valdeorras)² and Lorbazán (Monterrei)³ (Fig. 1: n.ºs 49, 50, 51, 52). These findings confirmed that evidence for Schematic Art paintings remained undetected largely due to biases in investigation, despite the potential of this region if seen as the geographical extension of others with major assemblages of painted rock shelters belonging to this tradition: Trás-os-Montes (Portugal), to the South, the Spanish regions of Salamanca, Zamora and Leon to the East, and Asturias to the North.

It should be stressed that rock art studies in Northern Portugal have observed, for many decades, that Schematic Art paintings were exclusively found in the eastern regions, therefore confining with the above-mentioned Spanish regions whereas a different rock art tradition had a predominantly Atlantic distribution and expanded towards western parts of Galicia⁴. However, this evidence did not kindle much attention in neighbouring academic circles, whose research interests were traditionally restricted to one style or the other and confined to the limits of its administrative borders⁵. Also, the traditional superstructure of archaeological investigation encouraged the accumulation of primary data intended to make their way into established explanatory frameworks. Yet, when alternative questions start to be asked and the establishment fails to provide paths on which to progress, when the subject strives to overcome the passive condition to which it was mostly relegated, the ground is set for change.

Progressing through alternative paths however does not necessarily imply eradicating but rather re-thinking past knowledge in the light of the proposals brought about by the pursuit of new research questions. Changes or adjustments to traditional thought should be regarded as carrying many histories: the histories of those who constructed it and the chronicles of the expedition followed by the challengers. To acknowledge that

¹ RODRÍGUEZ RELLÁN, FÁBREGAS VALCARCE, CARRERA RAMÍREZ, 2019.

² TEJERIZO-GARCÍA *et al.*, 2020; SANTOS-ESTÉVEZ, TEJERIZO-GARCÍA, ALONSO TOUCIDO, 2020.

³ COMENDADOR REY, 2020.

⁴ E. g. BAPTISTA, 1983-1984; JORGE, 1983; JORGE, 1991.

⁵ E. g. ALVES, COMENDADOR REY, 2017.

the construction of scientific knowledge is an interactive, collaborative process, necessarily implies recognizing the value and critically assess past and novel proposals, as well as their authorship. This is the insignia of mature academic environments that gather conditions to innovate and strive.

But, equally important, is that changes and adjustments to traditional thought may pave the way to groundbreaking findings, like that of the presence of Schematic Art paintings in Galicia. This paper tells the story of the discovery of Penedo Gordo alongside that of the theoretical and methodological framework on which the research strategy was constructed. It tells the story of a site whose rock paintings are not extremely well-preserved but, nonetheless, the strategy designed to approach its study induced the discovery of stratified deposits containing findings of exceptional interest for the investigation of Late Prehistory in Galicia.

2. SETTING THE BACKGROUND

The search for Schematic Art paintings in Galicia began in 2009 along the administrative borders with Portugal and León on the Tâmega and Sil valleys. We subsequently carried out a more extensive survey aiming the sites known in the regions confining with Galicia's administrative borders. Due to the uneven character of published information⁶, a framework of analysis was set out which allowed us to collect and systematize a wide range of information intended to go beyond the prevalent focus on the imagery represented on each site⁷. The goal was to apply to a wider geographical area the premises that had previously been designed for the reassessment of Schematic Art sites in Northeast Portugal⁸. Such premises were established in the light of a fresh body of ideas that, either directly or indirectly, emerged from the post-processualist debate from the mid-1990s in Anglo-Saxon Archaeology, bringing about the encouragement to look at prehistoric art beyond what was represented on the rock surfaces, i. e., beyond the analysis of individual motifs, as very often stated by R. Bradley⁹. Emphasis started to be issued to the setting of rock art in the landscape¹⁰, the significance of the natural place(s)¹¹ or on the human experience of such sites in a phenomenological perspective¹². Yet, at some point, as any rock art specialist from traditional core areas of investigation, like Iberia, France or Italy would become aware, the emphasis placed on the imagery was being replaced by a focus

⁶ The character of the publications was diverse, covering numerous papers, mostly of local or regional reach and rare site monographs. The amount of detail on the sites differed greatly and, particularly in older publications there was little information on anything else than the character of the motifs represented. Some unpublished data was collected on the web, other provided by local informants and booklets.

⁷ ALVES, COMENDADOR REY, 2017.

⁸ ALVES, 2002; ALVES, 2003.

⁹ E. g. BRADLEY, 1997.

¹⁰ E. g. BRADLEY, 1997.

¹¹ E. g. HELSKOG, 1999; BRADLEY, 2000.

¹² E. g. TILLEY, 1997.

on everything that surrounded it and the imagery itself left behind. It seemed necessary to re-shed light onto the designs and its creation. Hence, proposals inspired in Anthropology of Art literature from around the world, introduced the analysis of attributes of the motifs beyond (and adding to) typology and classification. Amongst those attributes were: a) the interaction between the motifs and natural features on the rock surface¹³ and between the motifs and the wider landscape¹⁴; b) inquires upon the performer's gestures combined with the physical experience of place¹⁵; c) the materiality of rock art and the processes by which images come into being¹⁶.

This paved the way to test a new framework based on dialectical scales of analysis and therefore conveying a pendular movement from the landscape to the rock face, which was applied to field research on Iberian rock art in the late 1990s/early 2000s¹⁷. As far as the Schematic Art assemblage was concerned, the aim was to draw on previous studies, filling in the more prevalent imagery-focused studies with information on the relationship between motifs and the physical features of the landscape, place and the rock outcrop¹⁸. The same methodology was later employed in the reassessment of selected painted rock shelters in Galicia's neighbouring regions¹⁹ and applied to the design of the project «Art-facts — the archaeological contexts of Schematic Art in the Côa Valley 2014-2016»²⁰ and later to Penedo Gordo²¹. Consistent with a focus on the investigation of the socio-cultural contexts of rock art, research included excavation in areas below the painted surfaces²².

Hence, the boundaries that confined our object of study have been stretched beyond the focus on motifs to embrace all the significant things around them — from the natural world to the archaeological contexts — so that the imagery was subsequently re-incorporated, perceived and approached under a different light.

3. LATE PREHISTORIC ART IN NORTH-WEST IBERIA — BOUNDARIES RESHAPED

The northwest of Iberia is a particularly interesting region to investigate post-glacial rock art for here two of the dominant traditions that span across vast areas of western Europe are known to come together: Schematic Art paintings and Atlantic Art (Fig. 2).

¹³ E. g. HELSKOG, 1999; BRADLEY, 2000; ALVES, 2002; TILLEY, 2004.

¹⁴ E. g. BRADLEY, 2000; ALVES, 2003.

¹⁵ E. g. TILLEY, 2004.

¹⁶ E. g. ALVES, 2009.

¹⁷ ALVES, 2003.

¹⁸ ALVES, 2003.

¹⁹ ALVES, COMENDADOR REY, 2017.

²⁰ ALVES *et al.*, 2014; REIS *et al.*, 2017.

²¹ COMENDADOR REY, *coord.*, 2022.

²² The excavation of Late Prehistoric Art sites has a very long tradition in Portuguese Archaeology and south-eastern Spain having become more current in the British Isles from the 2000s.

Because their wide distribution in Europe cuts across the administrative borders of different countries and, consequently, the boundaries between different academic traditions, their study is uneven across the board and each of them is relatively unknown outside their own geographical confines. Only researchers working in a region where the two rock art traditions come together, are more aware of the dynamics between them. This region was, until recently, confined to the North of Portugal. However, for many years, the two traditions were believed to be subsequent in time: Atlantic Art was supposed to have its origins in the Copper Age/Early Bronze Age whereas Schematic Art was assigned to the Neolithic. Therefore, each one was associated with quite distinct social and cultural contexts.

As mentioned, in the early 2000s, new readings of the evidence and interpretative proposals emerged from breaking with traditional research that stimulated the confinement of studies to particular regions, styles or sites, attempting to bring in a dialectical, unchained, perspective. One of these proposals²³ resulted from developing in greater detail the ideas put together by Bradley and Fábregas's in their 1998 paper *Crossing the border, a view from Galicia into the Portuguese evidence*²⁴. It was also inspired by A. M. Baptista's emphasis on studying rock art in the light of natural regions²⁵. Overall, the exercise resulted in re-shaping the geographical borders between Atlantic Art and Schematic Art paintings (Fig. 3).

From this research also emerged the proposal that Atlantic Art may have been already established in north-western Iberia in the 4th millennium BC and would therefore have been partly contemporary with Schematic Art paintings²⁶. This redefinition of the temporal boundaries would inevitably have profound implications not only in rock art studies but, most importantly, in re-thinking the dynamics of Late Prehistory in Northern Portugal. Hence, if the adoption (or rejection) of a rock art tradition is driven by the specificity of a particular social and cultural context, and if both these traditions are likely to be contemporary, this opens the question of «what if there were two distinct forms of societal organization and cultural identities in neighbouring regions of Northern Portugal in the Neolithic?».

²³ ALVES, 1997; ALVES, 2003; ALVES, 2009.

²⁴ BRADLEY, FÁBREGAS VALCARCE, 1998; See also ALVES, COMENDADOR REY, 2017.

²⁵ BAPTISTA, 1986: 33; BAPTISTA, 1983-1984: 73.

²⁶ ALVES, 2003; ALVES, 2009.

This is a question raised by the analysis of the evidence from rock art²⁷, that has never been tackled by mainstream Archaeology. Perhaps due to epistemological constraints, Prehistoric studies tended to be more devoted to the task of unifying phenomena (from megaliths to pottery styles) based on their formal characteristics, rather than examining and contrasting difference. So, providing this scenario, our attention was directed towards the environmental setting that each tradition is inexorably bound to. Drawing on Orlando Ribeiro's description of Portugal as sitting in between the Atlantic and the Mediterranean²⁸, an attempt was made to understand whether the transition between Atlantic Art and Schematic Art along the Vouga basin followed climatic variation²⁹. Later, new insights into the geographical characterisation of the study area led one of us to the employment of concepts borrowed from Biogeography³⁰. As detailed elsewhere, one of the fundamental objectives of this branch of Geographic studies is the establishment of typological hierarchical models of the territory known as eco-regions based on biomes, i. e., ecological communities sharing climatic conditions and geological features that support species with similar adaptation strategies³¹. Its interest to Human Geography rests on the evidence that economic strategies and the design of cultural landscapes are intimately linked to the presence of specific biomes, so it may be right to say that the features that characterise a particular biogeographical region are bound to shape the relationship between humans and the natural world³². Those features induce particular subsistence strategies, patterns of settlement, the range of resources available and the breeding cycles of plants and animal that mark the rhythm of rural life, as superbly described by Orlando Ribeiro³³.

Thus, overlapping the limits of the Biogeographical regions of Northern Portugal with the distribution of Atlantic and Schematic Art traditions, it is clear that the former predominantly sits in the Atlantic super-province of the Euro Siberian region whereas the former occurs in the Mediterranean Biogeographical region³⁴.

If we extend the analysis to all of the north-west of Iberia, the picture is rather similar, despite the few Atlantic Art sites that sporadically cross the biogeographical

²⁷ It is worth noting that the 2003 proposal covered not only Atlantic Art and Schematic Art (including the so-called Schematic Art carvings, earlier classified by A. M. Baptista's as Group 2 of the north-western Portugal rock carvings) but also their relationship with Megalithic Art (ALVES, 2003). However, in recent years our studies on this particular subject-matter have tended to let aside Schematic Art carvings due to the sheer difficulty facing current research in producing an accurate characterization of this style. The main problem lays in establishing, on judicious grounds, acceptable chronological boundaries of many of the motifs that typify the style, particularly if found on open-air outcrops lacking clear archaeological contexts.

²⁸ RIBEIRO, 1945.

²⁹ ALVES, 2003: 220, Fig. 71.

³⁰ ALVES, 2012; SPELLERBERG, SAWYER, 1999.

³¹ COSTA *et al.*, 1998: 6.

³² ALVES, REIS, 2017.

³³ RIBEIRO, 1945.

³⁴ AGUIAR, 2008: 42.

boundary but are nonetheless within the limits of a transition zone³⁵. There are also examples of Schematic Art paintings located in northernmost areas yet they are, as far as current knowledge tells us, outside the main area of distribution of Atlantic Art.

If we further extend the scale of analysis to Western Europe, the scenario is analogous with Schematic Art spanning across the Mediterranean biogeographical region of Europe, from Italy, Southern France and permeating almost entirely the Iberian territory, apart from its far northwest corner where it converges Atlantic Art, in the southernmost extents of the Atlantic Biogeographical region³⁶.

A major novelty in recent years is the redefinition of the northwesternmost limits of the distribution of Schematic Art paintings which are being stretched from north-east Portugal to the Galician heartland (Spain) after the discovery of Cova dos Mouros and Penedo Gordo.

Thus, the design of a new research strategy which implied exploring new possibilities beyond traditional methodological and theoretical confines, led to the advent of new proposals regarding the temporal and geographical limits of the major Prehistoric art traditions converging in the far end of Europe. Moreover, the study of the social and cultural dynamics underlying the proposed scenario has the potential to bring this peripheral region to the core of the debate on Neolithic Europe.

4. THE MAKING OF PENEDO GORDO (VILARDEVÓS, OURENSE): THE ROCK ART SEQUENCE AND EXCAVATION RESULTS

We shall now look at a case study in which many of these ideas were put into practice³⁷. As mentioned, Penedo Gordo is located in the southeast quadrant of Galicia, not far from the Portuguese border, near the hamlet of Feilas (Vilardevós, Ourense) (Fig. 4). The site sits halfway upslope a hill range flanked by the valley of river Tãmega to the southwest and the heights of Serra Seca to the northwest. It stands as an isolated and conspicuous quartzite outcrop measuring ca. 20x30x20m.

4.1. The rock art

The presence of rock paintings on the western front of the rock was first noticed by B. Rúa, X. L. Lozano, R. Gayoso and X. R. Reigada in October 2017. Soon after, B. Comendador Rey visited the site and informed governmental authorities of its scientific relevance, confirming the preliminary attribution of this assemblage to the Schematic Art tradition.

³⁵ E. g. ALVES, COMENDADOR REY, 2017.

³⁶ E. g. ALVES, 2012: Fig. 13, 1.

³⁷ The archaeological research carried out at Penedo Gordo in 2018/2019 was supported by the Galician Directorate General of Heritage after an invitation addressed to the University of Vigo.

In the following year, a multidisciplinary team from the University of Vigo directed by one of us (BCR)³⁸ gathered efforts to accomplish an ambitious protocol of research. This protocol was based on an interdisciplinary approach covering fieldwalking, geophysical surveys, rock art recording, small-scale excavation, edaphic and sedimentary studies, radiocarbon dating, as well as ethno-historical and anthropological inquiries. Regarding the documentation of the painted surfaces, the aim was to combine the recording of both the paintings and their backdrop with the diagnosis of their state of conservation, identification of biological colonies as well as the physical-chemical characterization of the rock paintings blending *in situ* and laboratory analysis³⁹.

The rock art catalogue was produced using a combination of traditional and novel recording techniques based on digital imaging processing in order to eliminate specific biases and shortcomings of each method. For instance, direct tracing allowed us to identify the remains of paintings which are still visible to the naked eye and distinguish between them and natural intrusions of iron ochre that may be mistaken for paintings when photos are enhanced with D-Stretch⁴⁰. The results of the 1:1 scale tracing were then combined with different techniques of colour image enhancement of photographs⁴¹ obtained by photography with polarised lighting⁴². Combining multiple techniques was particularly important on this site due to the poor state of conservation the motifs painted on open-air surfaces.

The survey of the rock outcrop allowed the identification of five upright surfaces — panels — containing paintings, mostly in red (despite some nuances) and mostly geometric. Panels 1 and 2 are found on the cliff walls facing the west and the remaining on the northern side of the outcrop (Fig. 5).

³⁸ Research team — project director: Beatriz Comendador Rey (Grupo de Estudos en Arqueoloxía, Antigüidade e Territorio, University of Vigo); Lara Bacelar Alves (CEAACP, University of Coimbra); researchers under temporary contracts: Vitor Rodríguez Muñiz and Nieves Amado Rolán; photogrammetry and 3D models: Benito Vilas Estévez. ARBORE S.L.; geophysical surveys: Natalia Caparrini Marín (Department of Engineering of Natural Resources and Environment; Vigo University); study of biological colonies: M.^a Eugenia López de Silanes, Graciela Paz Bermúdez (Department of Engineering of Natural Resources and Environment; Vigo University); *in situ* and laboratorial analysis of pigments: José Santiago Pozo-Antonio (Department of Engineering of Natural Resources and Environment; Vigo University); Pablo Barreiro Castro (RAMAN) (Department of Applied Physics, New Materials group, Vigo University); edaphological studies — head of research: Antonio Martínez Cortizas (Department of Edaphology and Agricultural Chemistry, University of Santiago de Compostela); diagnosis and specialised cleaning of rock art panels: Vera Caetano; oral tradition and place name data collection: Bruno Rúa Martínez; inventory of archaeological findings: B. Comendador Rey, Lucía Rodríguez Álvarez e Jéssica Silares de Diós (Faculty of History, Ourense, Vigo University); archaeobotanical study: María Martín Seijo (GEPN, USC); morphological and provenance studies of the lithic industry: M. Natividad Fuertes Prieto e Diego Herrero Alonso Universidad de León; traceological analysis of the lithic industry: Juan Gibaja Bao, CSIC-Barcelona; study of ceramic material: Miriam Cubas, Aranzadi Science Society; study and conservation of the bayonet: J. Manuel Candaes (Museo Militar de A Coruña) e Yolanda Porto Tenreiro (Fráxil S.L.).

³⁹ COMENDADOR REY, 2020; COMENDADOR REY, *coord.*, 2022; POZO-ANTONIO *et al.*, 2021.

⁴⁰ Image enhancement technique developed by John Harman is a plugin to ImageJ: <<https://www.dstretch.com>>.

⁴¹ GARCÍA VÁZQUEZ *et al.*, 2017.

⁴² CORTÓN NOYA, LÓPEZ GARCÍA, CARRERA RAMÍREZ, 2015.

On panel 1, paintings occur on two different areas. In the frontal area it shows a composition of eleven dots painted with the fingertips. Below, apparently disconnected from it and slightly hidden from view, there are three inconspicuous weathered motifs. Non-intrusive colour spectrophotometry analysis indicated that the red-green range of the painted dots do not show substantial variations which, adding to the exclusive use of hematite as pigment constituent shown by Raman spectroscopy, suggests that the cloud of dots was produced in a single moment.

Panel 2 is likewise an open-air surface exposed to the elements, which explains the extremely weathered conditions in which the paintings are found. The panel shows, on the left-hand side, dots and bars typical of the Schematic Art tradition and on the right, remains of paintings forming a group of lines barely visible to the naked eye. However, the photographic digital enhancement showed an upright line and two others coming out of each side, vaguely recalling the layout of a human figure. There is a notable difference between the weathering of the motifs on both sides of the panel. Also, there is a puzzling absence of paintings right on the centre, suggesting that some motifs may have been washed away for unknown reasons. Portable Raman spectroscopy added some interesting insights to the techno-morphological analysis for it attested the presence of three different types of pigment compositions, one containing exclusively hematite, detected in well-preserved motifs, another combining hematite and goethite and finally, the most weathered motif contains exclusively goethite⁴³.

Panel 3 is equally exposed to the elements and exhibits a human figure with triangular-shaped head on the right-hand side of a patch of pigment of similar dimensions. Both images are red-orange in colour, contrasting with the predominantly red colour of the majority of the site's rock paintings. Raman spectroscopy analysis demonstrated that the pigment used to create both the human figure and the patch to its left contain goethite⁴⁴. Thus, the paintings on panel 3 are unique at Penedo Gordo for their distinct colour and the presence of a human figure of apparent bi-triangular shape which pigment is exclusively composed of goethite.

Panel 4 corresponds to a white quartz intrusion in the rock formation and is located in a more sheltered area of the outcrop, which allowed a better preservation of the rock paintings that exhibit the brightest and most solid colour of the whole assemblage. On the left-hand side we find two vertical bars, one of which attached to two others set at an angle. On the right-hand sector a coat of paint is clearly superimposed over an indeterminate figure, partly hidden. This indicates that there were actions taking place subsequently, however, regarding pigment composition, there is a rather consistent use

⁴³ POZO-ANTONIO *et al.*, 2021.

⁴⁴ POZO-ANTONIO *et al.*, 2021.

of hematite exclusively. Moreover, colour spectrophotometry analysis shows that the red-green spectrum provides even values across the whole composition.

Next to it, panel 5 shows an oval-shaped form likely to have been produced by a fingertip and shapeless patches of pigment that are overall composed of hematite.

It should also be noted that, beyond the intentional selection of surfaces with particular morphological features apparently ideal to frame or fit in specific compositions, like we see on panels 1, 2 and 3, there is little interaction with the physical properties of the backdrop, like mineral intrusions or microtopographic gradations. In this respect, panel 4 is exceptional. Here, the white quartz backdrop offers a rather uneven surface folded in the middle in an angle that contains a deep oval hole. The paintings do not interact directly with this feature yet those at the far end of the right-hand side section were conspicuously placed against the fissures that mark the panel's edge.

So, insights on the modes by which the imagery came into being were gathered from the techno-morphological examination and pigment analysis. These results allow us to propose that the creation of the rock art at Penedo Gordo might have involved at least two different stages: an earlier moment represented by the paintings on panel 3 and some of the most weathered on the right-hand sector of panel 2, even though they do not show the same motif typology. This hypothesis is grounded not only on their degree of weathering and presence of goethite in pigment composition, but also on the morphological character of the human figure on panel 3 which shows striking resemblances with an anthropomorph with a triangular-shaped head painted on a pebble from an Early Neolithic context at Cueva de Chaves, in Bastarás, Huesca⁴⁵ (Fig. 6). The remaining paintings on site show some coherence in terms of pigment composition, colour and on the exclusive use of the simplest geometric forms of the Schematic Art repertoire, dots and bars, that only in the case of panel 1 enfold a sense of composition.

4.2. Excavation results

The study of the rock art was complemented with the excavation of two small trenches opened immediately below two decorated surfaces, aiming to attest the presence of human activity on site and if so, whether it could be related in any way with the period in which Schematic Art was in use. Providing its landscape setting, the fact that the outcrop is readily accessible on a platform half-way upslope, which aids sustaining soil deposits, and the characteristics of the place itself configuring an ideal area for shelter, Penedo Gordo seemed to gather suitable conditions to preserve stratified deposits (Fig. 7).

In the western sector, the trench was positioned right against the rock wall below panel 2. Here, the upper layers showed intense human activity signalled by the presence

⁴⁵ UTRILLA MIRANDA, BALDELLOU MARTÍNEZ, 2001-2002: Fig. 13; UTRILLA MIRANDA, LABORDA LLORENTE, 2018.

of small open hearths and a single pottery sherd of historical date, mixed up with a set of prehistoric lithic material. On the bottom layer, a hollow dug on the bedrock preserved a fragment of a 19th century bayonet, which is most likely to be associated with an event named «the Penedo Gordo assault», one the numerous battles that took place in this border region during the Peninsular War (1807-1814)⁴⁶. Although sediments of prehistoric origin were detected by edaphic analysis, there is no evidence for preserved stratigraphy from that period, unlike what was observed on the opposite side of the outcrop.

In the northern sector, the trench was located below panels 4 and 5, right next to the most sheltered area of the rock formation. Our expectations were again to collect any material evidence for prehistoric occupation on site (sediments, structures, artefacts) and even perhaps a loose piece of quartzite containing remains of paintings buried in the stratigraphy, given that there was a significant amount of fallen blocks lying on the ground. And, in fact, the excavation confirmed the occurrence of preserved stratigraphy containing few pottery fragments but a relevant assemblage of lithics (Fig. 8). These were produced on a variety of raw materials, predominantly white quartz, quartz crystal and, to a lesser extent, flint and porphyry, from non-local sources. Typological and use-wear analysis⁴⁷ indicate that the large majority of white quartz and quartz crystal findings correspond to debitage products given that all the steps of the *chaîne opératoire* are present here. In the case of flint and porphyry, from non-local sources, were exclusively found pre-shaped flakes and finished tools (Fig. 8). Amongst them were a geometric microlith (circle segment), two arrowheads, a *backed blade* and a retouched blade with evidence of sickle-gloss (Fig. 9). The presence of ten flint tools, and particularly the blades, at Penedo Gordo is remarkable in the regional context for they do not only fill an important gap for the hinterland of the Ourense province⁴⁸, but it clearly stands as a high percentage from a single site for the whole of Galicia. This is even more significant because they are apparently associated with daily activities whereas the majority of the findings of flint in the region are finished tools exhumed from funerary monuments⁴⁹. Moreover, the identification of different types of flint indicates the use of multiple supply routes, as described for northern Meseta⁵⁰.

As far as the stratigraphic sequence is concerned, the twenty-five units recorded seemed to stage a *continuum* of activities of similar character with no significant *hiatus*. The presence of lithic material was apparently uninterrupted and the occurrence of small

⁴⁶ COMENDADOR REY, *coord.*, 2022.

⁴⁷ GIBAJA, 2022; FUERTES PRIETO, HERRERO ALONSO, 2022. The study of the lithic industry was carried out by Juan Gibaja Bao from CSIC-Barcelona (use-wear) and Natividad Fuertes and Diego Herrero, from the University of León (morphology and provenance studies).

⁴⁸ LOMBERA-HERMIDA, RODRÍGUEZ RELLÁN, VAQUERO RODRÍGUEZ, 2016: 149.

⁴⁹ RODRÍGUEZ RELLÁN, LOMBERA-HERMIDA, FÁBREGAS VALCARCE, 2010: 69, Fig. 2.

⁵⁰ FUERTES PRIETO, NEIRA CAMPOS, FERNÁNDEZ MARTÍNEZ, 2015; FUERTES PRIETO *et al.*, 2016.

to medium sized fallen quartzite blocks was detected throughout. Only the superficial layers retained materials of historical date.

However, edaphological analysis of the stratigraphic sequence produced quite unexpected results for there were identified two independent categories of sediments, assembled in two large packages that establish a break in the sequence between units UE213 and UE218. The data therefore points out to the occurrence of two periods of occupation separated by a wide temporal gap.

The evidence from sediment analysis was subsequently corroborated by C14-AMS dating. Given the presence of a succession of small areas of burnt soil, charcoal samples were exhumed from across the stratigraphy for radiocarbon dating⁵¹. One of the upper layers (UE213) provides a date from the mid-3rd millennium BC (2565-2305 cal BC) whereas that from a sample collected in a lower layer (UE222) points out to the first half of the 4th millennium BC (3935-3655 cal BC) (Table 1). However, taking into account that the excavation failed to reach the bedrock in the first season, the possibility of unveiling an earlier stage of occupation cannot be entirely discarded.

Table 1. Radiocarbon dates

Lab code	Beta-519996	Beta-521799
Provenance layer	UE213	UE222
Method	AMS	AMS
Material	Charcoal	Charcoal
Taxon	<i>Quercus sp. caducifolio</i>	<i>Quercus sp. caducifolio</i>
Uncalibrated age (BP)	3940±30BP	4990±30BP
Cal 2 σ	2565-2305 cal BP	3935-3655 cal BP
Probability	95,4%	95,4%
Variables: d13C	-26,2‰	-26,4‰
Calibration Curve	IntCal 20	IntCal 20

So, excavation allowed us to confirm the presence of human activities immediately below the rock art panels dated to the Neolithic and, subsequently, to the Copper Age. Notwithstanding the small-scale of the excavation, these activities seem to be mostly related to the production of lithic industry likely to be used within a spectrum of tasks

⁵¹ COMENDADOR REY, *coord.*, 2022: 174-181. The C14-AMS dating was conducted at the BETA Analytic Inc Laboratory (Miami, USA). The charcoal samples were previously the object of an archaeobotanical study by Maria Martín Sejo (University of Santiago de Compostela, Galicia, Spain). The dates are the result of radiocarbon calibration using the OxCal v4.4. program (BRONK, 2009) and the intCal20 calibration curve (REIMER *et al.*, 2020).

associated directly with the character of the (either intermittent or seasonal) occupation of this particular environment: hunting, scrapping soft and semi-hard materials and perhaps harvesting.

The presence of human activity in painted rock shelters is not frequent but it is not uncommon either⁵². The evidence grants researchers the possibility to assess the character of the occupation and draw proposals as to a conceivable temporal association between the creation of the rock art and the moment in which activities took place on site. Yet, an extraordinary finding at Penedo Gordo allows us to give a step further in the interpretation on how the site came into being. In fact, the excavation revealed a grey quartzite fragment and a block of soil, from UE205 and UE208 respectively, showing red spots with a similar colour to the pigments employed in the rock paintings. *In situ*, the latter resembled a drop of paint fallen on the ground and was extremely well-preserved (Fig. 10). Subsequent laboratorial analysis confirmed that the red crust on the stone was not a natural mineral intrusion but a homogeneous layer sitting on top of the surface. Moreover, both red-coloured deposits found on the quartzite fragment and on the block of soil showed a similar mineral composition. They contained hematite just like the pigments of the motifs analysed on the panel above. Hence, it seems plausible that these samples are related to the action of painting the geometric signs on panel 4 and they were exhumed from the layers above the sedimentary cleavage that separates the two main phases of activities on site. If this was the case, this data complements both the results of the techno-morphological observations and analytical studies of the rock art, in which the geometric paintings on panel 4 would be ascribed to the end of the sequence, which may be dated, yet not directly, to around, or soon after, the mid-3rd millennium BC.

In addition, loose stone fragments collected on the same trench showed red-coloured mineral intrusions, suggesting that the raw material for painting might have been readily available around the rock outcrop.

4.3. Summing up

As the inaugural chapter of research at Penedo Gordo comes to a close there are three main ideas worth highlighting:

1. The potential of south-eastern Galicia for the discovery of sites with Schematic Art paintings and the need to address its study from an integrated cross-border approach as shown by previous studies⁵³.

⁵² E. g. SANCHES, 1997.

⁵³ ALVES, COMENDADOR REY, 2017.

2. The north-west of Iberia is one of the most interesting European regions to study the encounter of major post-glacial rock art traditions. The expansion of the study of Schematic Art paintings across this region is fundamental to understand the dialogue between the different manifestations of Late Prehistoric Art.
3. The relevance of the study of Schematic Art sites for the investigation of the Neolithic in Galicia as well as for a more comprehensive approach of the mobility of human groups in Late Prehistory. In this sense, the recent publication of fragments of Cardial ware from Cova Eirós⁵⁴, which production is unique in the context of the northwest and the territory North of Mondego, though with parallels in the Portuguese Extremadura, suggests the arrival of this exotic item through contact between hunter-gatherer and agricultural communities across Western Iberia. In the context of the long-distance movement of objects in the beginning of the Neolithic, the Régua-Verín natural corridor connecting the central area of Northern Portugal to Galicia might have played a fundamental role, given that Early Neolithic sites dating from the first half of the 5th millennium BC are known in the northeast Portuguese region of Trás-os-Montes⁵⁵. And, in fact, the research carried out at Penedo Gordo, overlooking the Régua-Verín passage, led to the identification of stratified archaeological deposits dating from at least the Middle Neolithic. Although this site is in its earlier stages of excavation, the 2018 season corroborated its huge potential.

5. CONCLUSION

We briefly described the foundations of a new ontology in rock art studies, borrowing an expression used by A. M. Jones⁵⁶, emerging in the mid-1990s that have slowly (and at times not entirely consciously) have been making its way into very diverse academic milieus. It developed amidst the eruption of epistemological experiments following the post-processualist debate and a generalized distrust in the foundations of archaeological thought upon the rigid ruling of Grand Theories which were seen as a kind of readily-made wrapping material to which many acritically attached the primary data. On the contrary, this movement appealed to critical thought, self-assessment, fluidity of proposals, freedom of thought and a balanced relationship between the subject and the object of study. And so, long-lasting borders constraining archaeological thought started to fall, to be redesigned and perceived as dynamic entities.

As far as our subject-matter is concerned, often seen as marginal and self-contained, questions started to be raised as to what should be the role of rock art studies in Archaeology and how they might contribute to the most prominent debates on European

⁵⁴ FÁBREGAS VALCARCE *et al.*, 2019.

⁵⁵ E. g. SANCHES, 1997; MONTEIRO-RODRIGUES, 2011.

⁵⁶ JONES, 2017.

Prehistory. Rock art studies should be oriented towards, and actively participate, in the current debates on the dynamics of Prehistoric societies. Not only should they adopt a greater contextual scope but also scholars dealing with related topics should attend to and critically review the results of rock art research, in a symmetrical perspective.

As stated, these ideas have been developed and evolving for the northwest Iberian contexts over the last two decades. The case study of Penedo Gordo shows how the construction of alternative methodological strategies may be influential for restructuring the global understanding of post-glacial art towards the edge of the Continent⁵⁷ and re-thinking the cultural and social dynamics of Late Prehistory. In this respect, the application of dialectical scales of analysis allied to the comparative study of the different post-glacial rock art traditions found in Northern Portugal, resulted in re-shaping the chronological boundaries of Atlantic Art and to propose its coexistence with Schematic Art paintings in the 4th millennium BC⁵⁸.

This strategy, grounded our extended approach to the whole of the northeast⁵⁹, and is now being applied to the same contexts using other variables⁶⁰. Also, the use of Biogeography as a methodological device, first employed by one of us (LBA) in 2012⁶¹ as an additional tool to our analysis of the contrasting distribution of Atlantic and Schematic Art, is currently being transferred and experimented in the study of a range of different topics on the Late Prehistory of north-west Iberia⁶².

At Penedo Gordo, an all-inclusive protocol of field research attempted to replicate the principles applied to the wider scale, with stimulating results from the analysis of the rock art sequence but mainly from the exceptional character of the lithic industry unveiled in the 1m x 1,5 m trench that will bring a significant contribution to the advances of Neolithic studies in Galicia.

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⁵⁷ And also putting it into perspective within European contemporary contexts e. g. ALVES, 2012; VALDEZ-TULLET, 2019; BRADLEY, 2020.

⁵⁸ E. g. ALVES, 2003.

⁵⁹ ALVES, COMENDADOR REY, 2017.

⁶⁰ SANTOS-ESTÉVEZ, TEJERIZO-GARCÍA, ALONSO TOUCIDO, 2020.

⁶¹ See also ALVES, 2014; ALVES, REIS, 2017; ALVES, COMENDADOR REY, 2017.

⁶² CANHA, this volume; SANCHES, 2020; BETTENCOURT, 2021.

Monterrei»» was founded by Convocatoria Grupos de Investigación Campus de Ourense, University of Vigo, INOU2020. Code: 2020 OUR1 131H 647.

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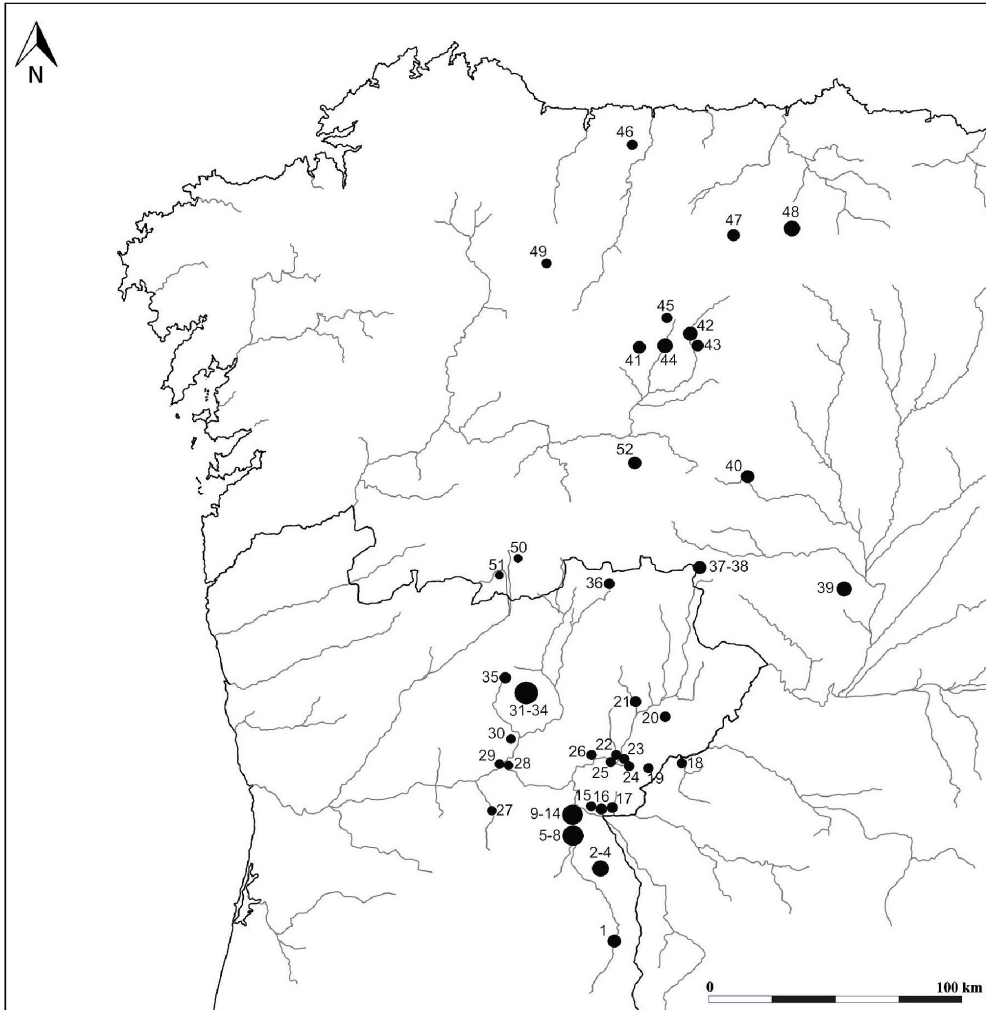


Fig. 1. Location of 52 sites with Schematic Art paintings in the northwest of Iberia located closer to the administrative borders (adapt. ALVES, COMENDADOR REY, 2017): n.º 50. Penedo Gordo/Penedo da Moura, Vilardevós, Ourense, Galicia, Spain

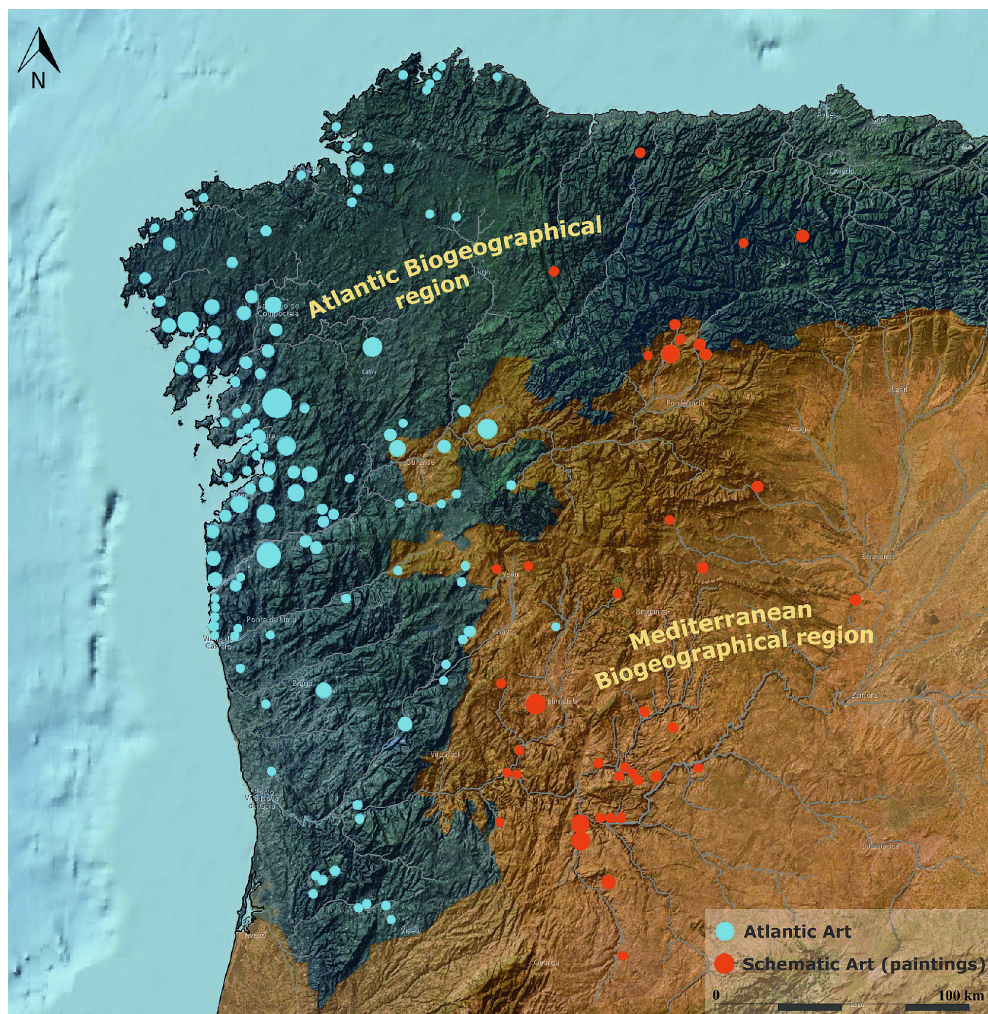


Fig. 2. Distribution of Atlantic Art and Schematic Art paintings in the northwest of Iberia and their relationship with the confines of two of the major European biogeographical regions (adapt. ALVES, COMENDADOR REY, 2017; for further details on the wider distribution of both rock art traditions across Europe, see ALVES, 2012: Fig. 13, 1). On the foundations of this exercise was the ambition to diversify the methodological strategies to approach Late Prehistoric Art in northwestern Iberia aiming to encourage new questionings and shedding new light on this subject. This way, some options were deliberately made, like setting aside particular realities that we consider to still be ill-defined, like, for example, open-air Schematic Art carvings

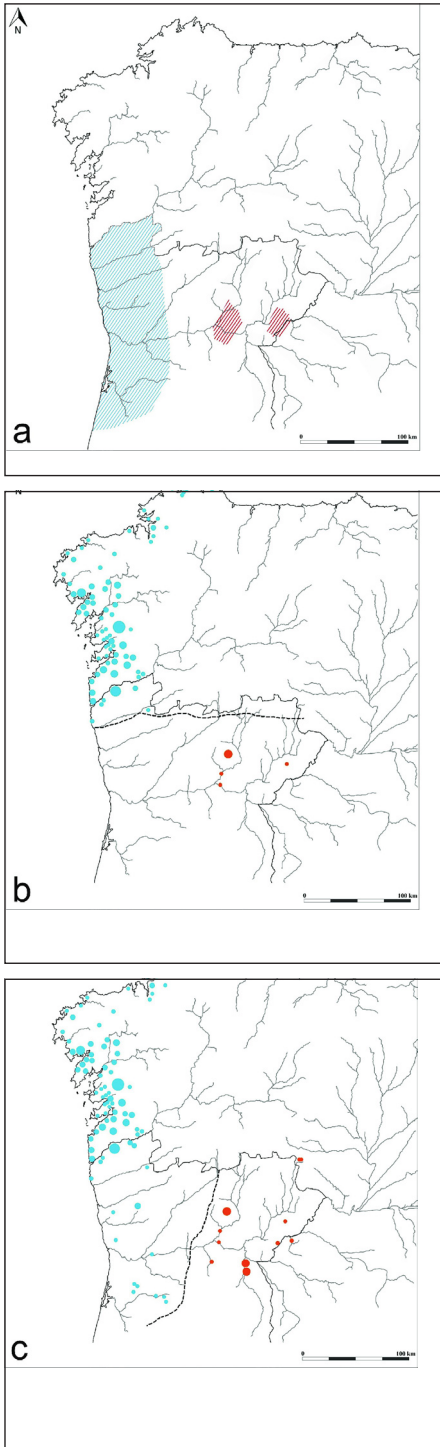


Fig. 3. Distribution of Iberian Atlantic Art and Schematic Art paintings as shown by different authors over time (a. BAPTISTA, 1986; b. adapt. BRADLEY, FÁBREGAS VALCARCE, 1998; c. ALVES, 2003, 2009); c. and the proposals for the definition of a transition area between both rock art traditions (a., b.) — adapt. ALVES, COMENDADOR REY, 2017

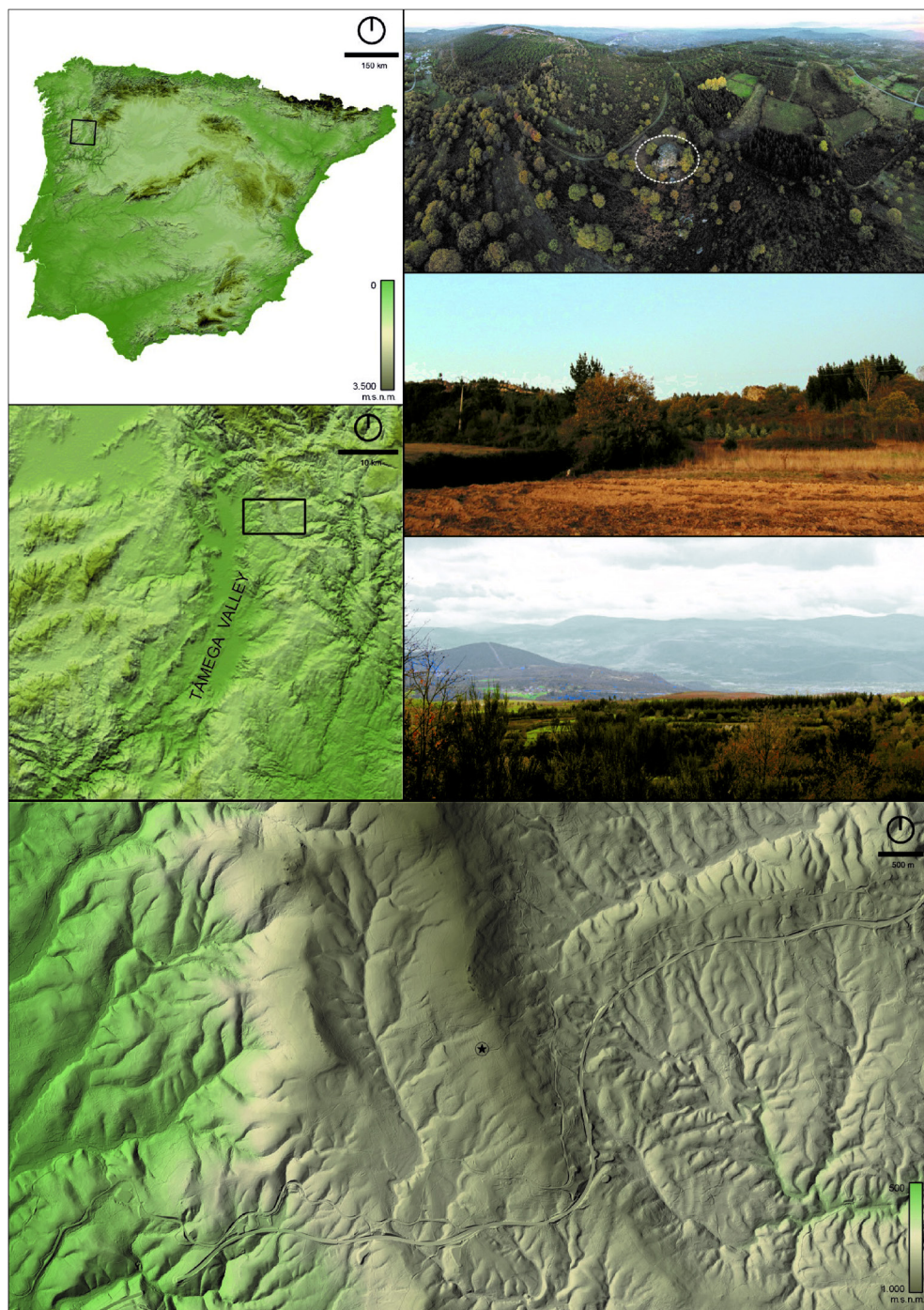


Fig. 4. The location of Penedo Gordo at different scales and its landscape setting (a.) with views towards (b.) and from the site (c.)

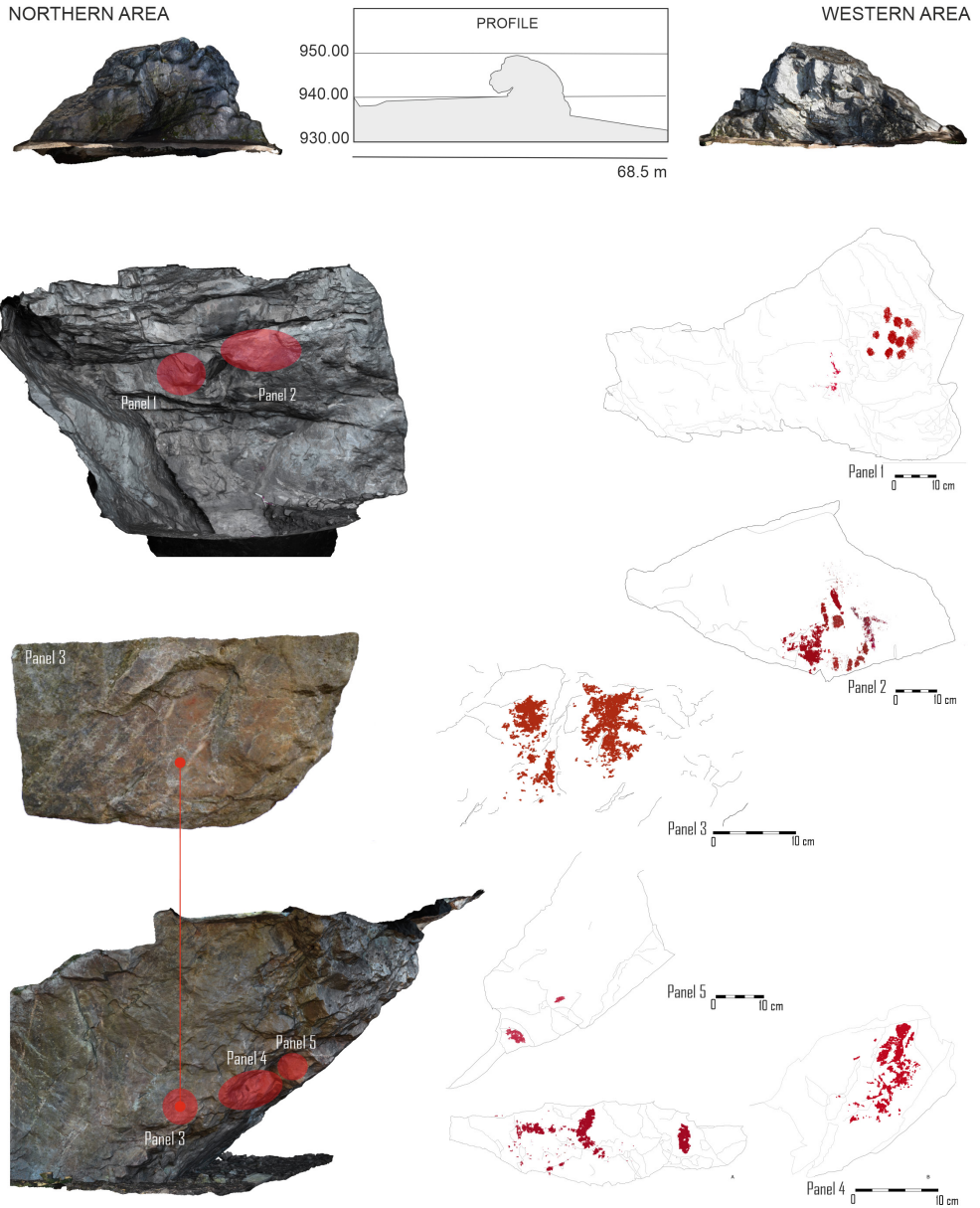


Fig. 5. Location of the two areas excavated at Penedo Gordo in 2018. The positioning of panels 1 and 2 on the 3D models of part of the western face of the outcrop and associated rock art records. The positioning of panels 3, 4 and 5 on the 3D models of part of the northern walls of the outcrop and associated rock art records. Virtual tours to the site of Penedo Gordo are accessible in <http://premedia.webs7.uvigo.es/>

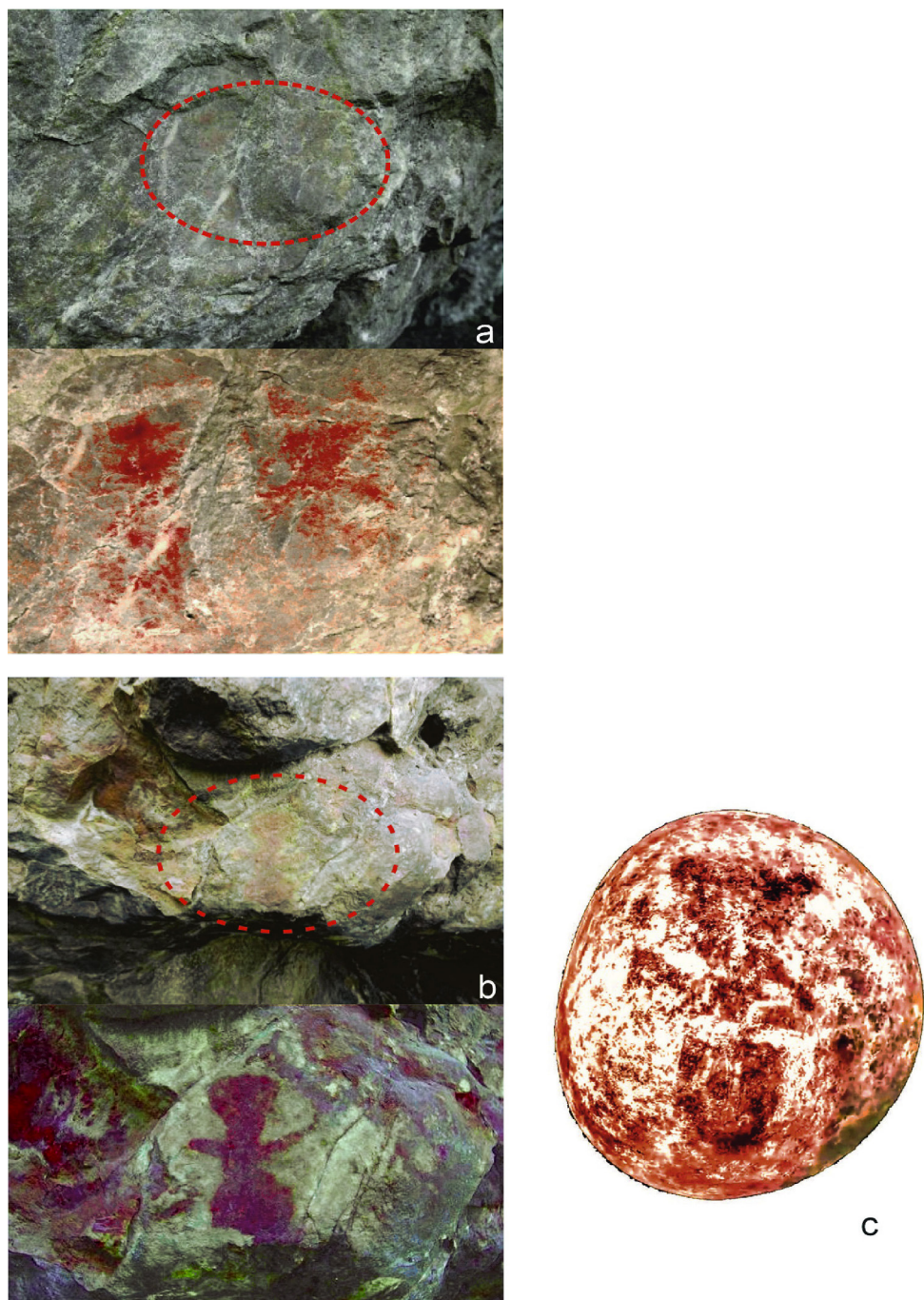


Fig. 6. Comparison between the morphology of figure on Panel 3 at Penedo Gordo. Abrigo de Piruetanal, Ciudad Real (photo: El Primer Arte), and that of a human figure painted on a pebble from La Cueva de Chaves, Bastarás, Huesca (UTRILLA MIRANDA, LABORDA LLORENTE, 2018: Fig. 14)

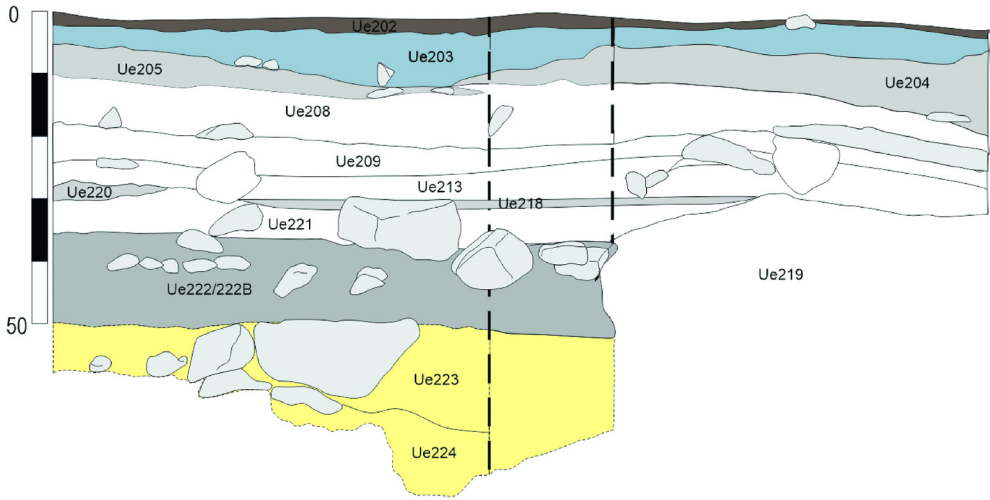


Fig. 7. Penedo Gordo. Northern sector — West section

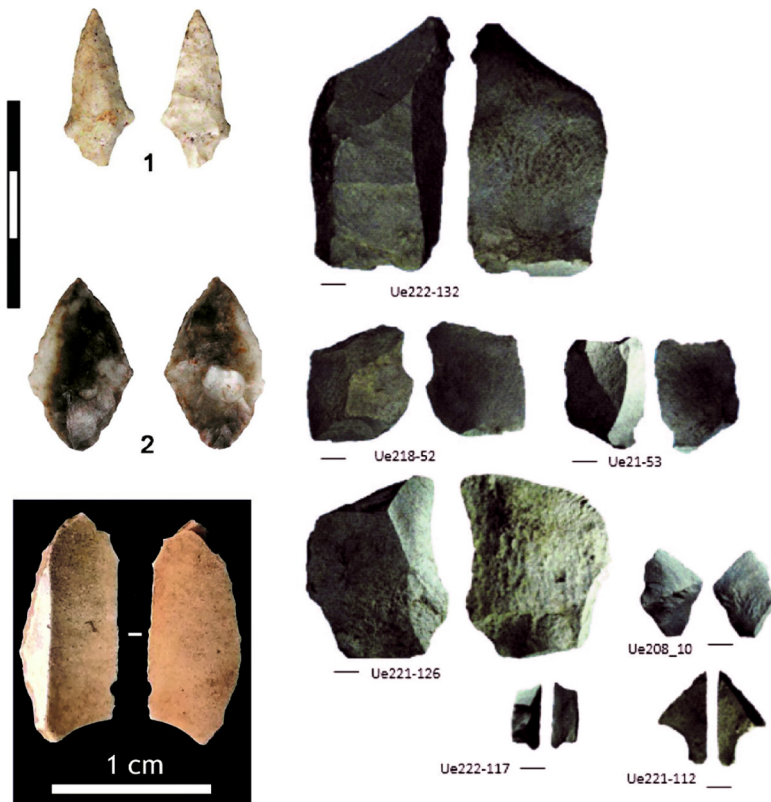


Fig. 8. Selection of lithic material from the northern trench: arrowhead PG18SNb140 (Ue218); arrowhead PG18SNb359 (Ue221); segment PG18SNb510 (Ue218); porphyry material recovered in the northern sector

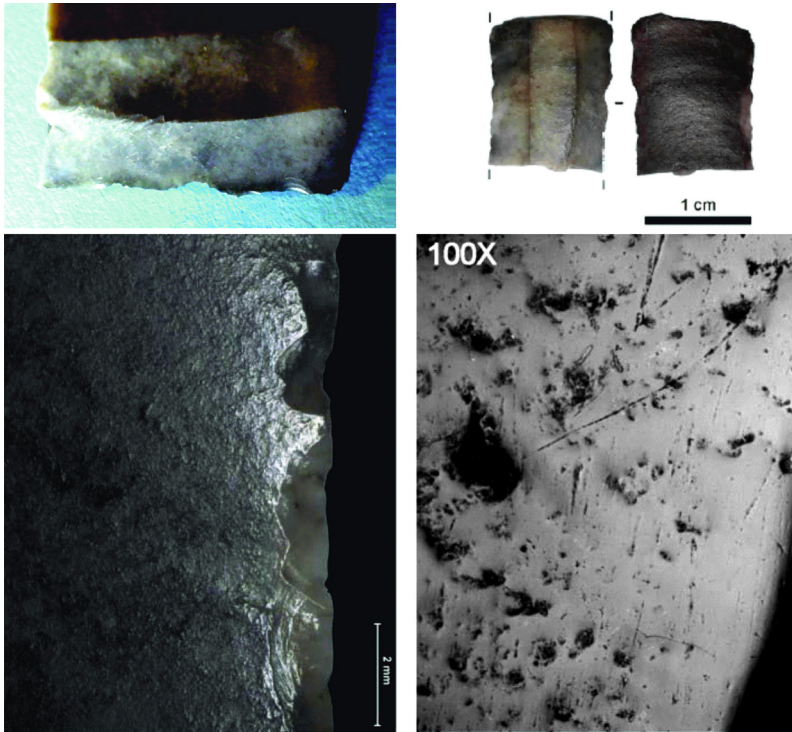


Fig. 9. Sicklegloss on a flint blade (UE2020) from the trench on the northern sector. This piece shows evidence for repeated action of retouching (photograph by J. Gibaja, CSIC)

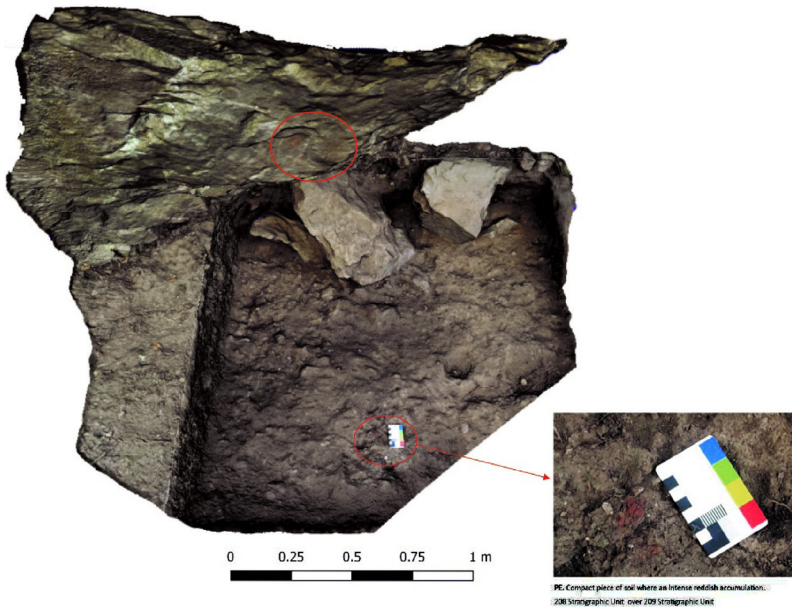


Fig. 10. Drop of painting material found in the stratigraphic sequence of the northern trench